Attachment 7: Disadvantaged Community Assistance

Documentation of the Presence and Needs of DACs

This Proposition 84 Implementation Grant Proposal for the Mokelumne / Amador / Calaveras (MAC) Integrated Regional Water Management (IRWM) Planning Region includes three projects, all of which will address critical water supply needs to disadvantaged communities (DACs) within the Region. These projects are Amador Water Agency's (AWA's) Lake Camanche Service Lateral Replacement – Phase 3, Calaveras County Water District's (CCWD's) Sheep Ranch Drinking Water Compliance Project, and AWA's MAC Region Water Conservation Program.

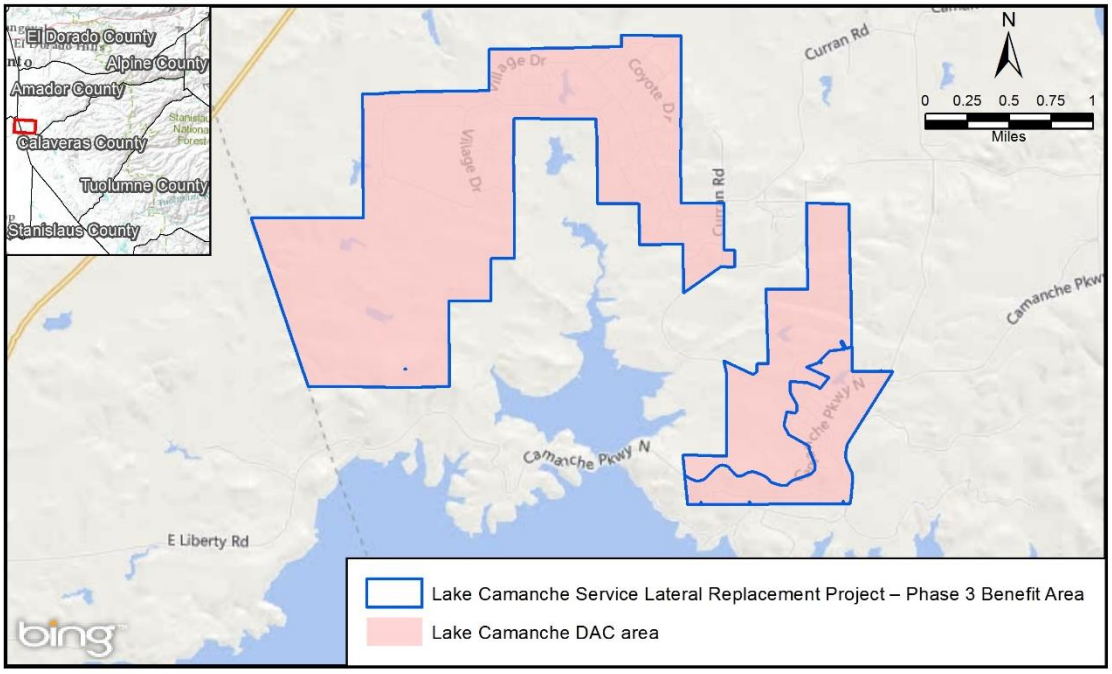
According to the Prop 84 Guidelines, a "disadvantaged community" (DAC) is defined by the State of California as a community with an annual median household income (MHI) that is less than 80 percent of the statewide MHI Public Resources Code, 75005(g). The U.S. Census Bureau's American Community Survey (ACS) includes MHI data compiled for the 5-year period from 2009 to 2013. A community with an MHI of $48,875 or less is considered a DAC. The following discussion provides support for each projects' DAC status.

Lake Camanche Service Lateral Replacement – Phase 3 Project

Documentation of the Presence of a DAC

Lake Camanche Village was independently determined in September 2010 to be a DAC. This area is part of a larger census block that, as a whole, does not qualify as a DAC. The California Department of Public Health (CDPH) requested that an income survey be performed for the water service area known as the Lake Camanche Valley Water System (CSA #3) in order to establish a local MHI for grant and loan funding programs. The Rural Community Assistance Corporation (RCAC) performed the income survey according to the State and Federal guidelines established for the California State Revolving Fund Loan Program in mid-2010 and determined the MHI of the Lake Camanche Village (the area served by Lake Camanche Valley Water System) to be $48,106 (with a survey response rate of 70%, corresponding to receipt of 423 surveys). Per the 2015 Guidelines, a community must have an MHI less than or equal to $48,875 to be considered a DAC. Accordingly, based on data collected as part of the RCAC Lake Camanche income survey, Lake Camanche Village qualifies as a disadvantaged community. The RCAC income survey results are provided in Appendix 7-1. Figure 7-1 provides a map showing this area, and illustrates that the project boundaries and benefit area are entirely within the DAC area.

Figure 7-1: Lake Camanche Service Lateral Replacement – Phase 3 Project DAC Area



DAC Needs and Benefits

The project will provide direct water-related supply benefits to Lake Camanche Village, a DAC that is a major subdivision in western Amador County near the shore of Camanche Reservoir (a recreation and flood control reservoir) and is classified as a DAC. This project is needed within Lake Camanche Village because the existing polyethylene ("Poly-Tube") laterals, installed in the late 1970s, are very brittle and subject to severe longitudinal cracking, resulting in significant water losses and infrastructure damage. During fiscal year 2011/2012, AWA produced 91.22 million gallons of water, but only sold 86.93 million gallons, indicating up to 4.29 million gallons per year are lost. By replacing the service laterals, AWA will reduce this loss to ensure that sufficient water is available for emergency and drought situations, and that water will be available to meet increasing water demands in Lake Camanche Village.

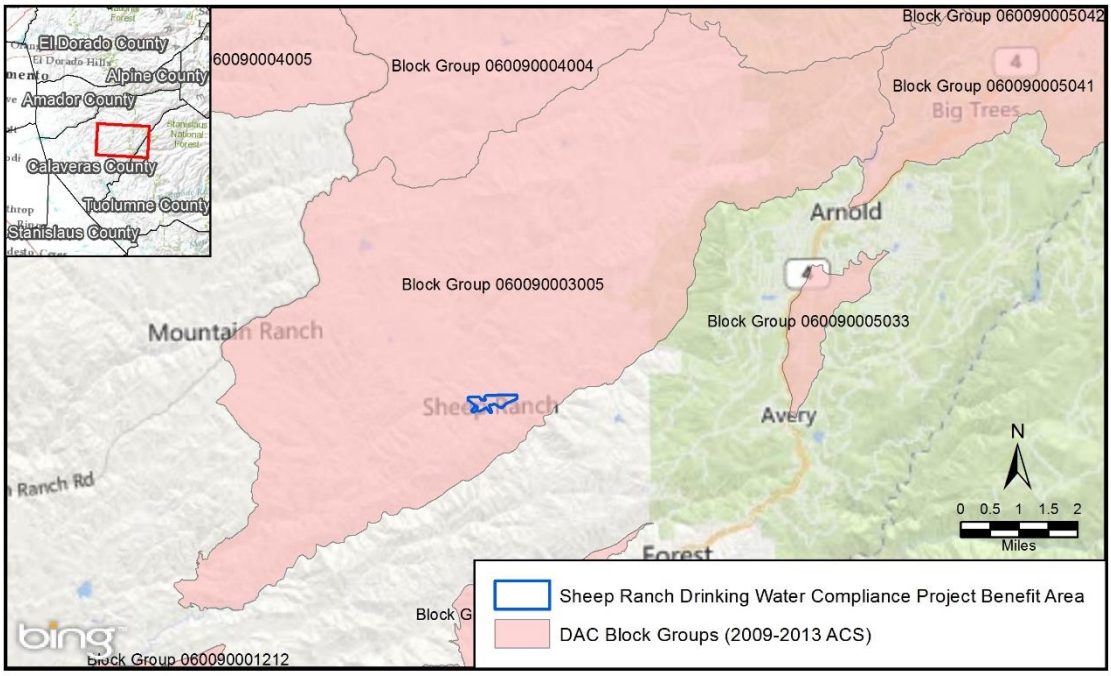
100% of the project benefit is expected to go towards this DAC given that the project area is encompassed by the DAC. Specifically, system losses will be reduced by 3.6 AFY and chlorine discharge to local waters and the environment will be reduced by 8.9 pounds per year.

Sheep Ranch Drinking Water Compliance Project

Documentation of the Presence of a DAC

The Sheep Ranch Drinking Water Compliance Project will provide a direct water-related supply benefit to the Sheep Ranch community, which is considered a DAC. The Sheep Ranch DAC was identified using DWR's Disadvantaged Communities Mapping Tool, which uses data from the 2009-2013 ACS, and found that the Sheep Ranch community is located entirely within Block Group ID Number: 060090003005, which has an MHI of $37,331. Per the 2015 Guidelines, a community must have an MHI less than or equal to $48,875 to be considered a DAC. Accordingly, based on 2009-2013 ACS Block Group data, the Sheep Ranch Community qualifies as a disadvantaged community. Figure 7-2 provides a map showing this area, and illustrates that the project boundaries and benefit area are entirely within the DAC area.

Figure 7-2: Sheep Ranch Drinking Water Compliance Project DAC Area



DAC Needs and Benefits

CCWD diverts water to the Sheep Ranch community from San Antonio Creek, which is then treated at the Sheep Ranch Water Treatment Plant (WTP). CCWD has received several items of correspondence from the State Water Resource Control Board (SWRCB) Department of Drinking Water (DDW) stating that the water treatment plant should be upgraded to provide better reliability and improved protection of public health. During times when turbidity in San Antonio Creek is high, CCWD must shut down the WTP due to inadequate treatment capabilities. During times when the WTP has to be shut down due to inability to adequately treat source water quality, CCWD relies on trucked water to serve the Sheep Ranch customers. This project will prevent the need to shut down the plant and truck in water, providing a more reliable and cost-effective water supply, reduce the use of coagulants for treating surface water. 100% of the benefits of the project will directly serve this DAC community. These include the primary benefit of 0.06 AFY of water supply conserved, and the secondary benefit of water quality improvements, which include the following reductions: 1.0 mg/L of alum dosage, 12,800 lb aluminum, 18,600 lb potassium, and 30,600 lb sulfur.

MAC Region Water Conservation Program

Documentation of the Presence of a DAC

The MAC Region Water Conservation Program will provide a direct water-related supply benefit to DACs in the MAC Region. The components of the project can be divided into four general areas as defined by each of the program components: the Amador Area Water Conservation Program Implementation (managed by the Amador Water Agency [AWA]), the Calaveras Area Water Conservation Program Implementation (managed by the Calaveras County Water District [CCWD]), Home-Level Water Conservation for Severely Disadvantaged Communities (managed by the Amador Tuolumne Community Action Agency [ATCAA]), and the DAC Residential Rain Catchment Demonstration and Distribution Project (managed by the Foothill Conservancy).

The Amador Area Water Conservation Program Implementation component (Task 11 of the Work Plan) will take place in the AWA service area, as shown in Figure 7-3. The AWA service area, which is 36,514 acres, contains 11,228 acres of DAC designated census places as defined by the 2009-2013 ACS. These areas include Sutter Creek (MHI of $45,919), Amador (MHI of $32,500), Jackson (MHI of $42,959), Plymouth (MHI of $45,000), Fiddletown (MHI of $48,359), Martell (MHI of $13,814), Pine Grove (MHI of $44,148), Pioneer (MHI of $37,574), Red Corral (MHI of $32,070), River Pines (MHI of $32,470), and Volcano (MHI of $0). Per the 2015 Guidelines, a community must have an MHI less than or equal to $48,875 to be considered a DAC; therefore, these places are defined as DACs. In addition, CDPH requested that an income survey be performed for the water service area known as the Lake Camanche Valley Water System (CSA #3) in order to establish a local MHI for grant and loan funding programs. The RCAC performed the income survey according to the State and Federal guidelines established for the California State Revolving Fund Loan Program in mid-2010 and determined the MHI of the Lake Camanche Village (the area served by Lake Camanche Valley Water System) to be $48,106 (with a survey response rate of 70%, corresponding to receipt of 423 surveys). Per the 2015 Guidelines, a community must have an MHI less than or equal to $48,875 to be considered a DAC. Accordingly, based on data collected as part of the RCAC Lake Camanche income survey, Lake Camanche Village qualifies as a disadvantaged community, adding approximately 4,030 acres of DAC area. The RCAC income survey results are provided in Appendix 7-1. AWA also performed a similar DAC survey for its customers along its raw water canal alignment, and found that customers in the area had an MHI of $34,554 which is below the 2015 Guideline defined DAC definition of having an MHI less than or equal to $48,875. This area adds an additional 5,369 acres of DAC area. This survey information and a map of the DAC area is provided in Appendix 7-2. Figure 7-3 provides a map showing this area, and illustrates that the Amador Area Water Conservation Program Implementation component boundaries and benefit area are comprised of approximately 56% DAC by area.

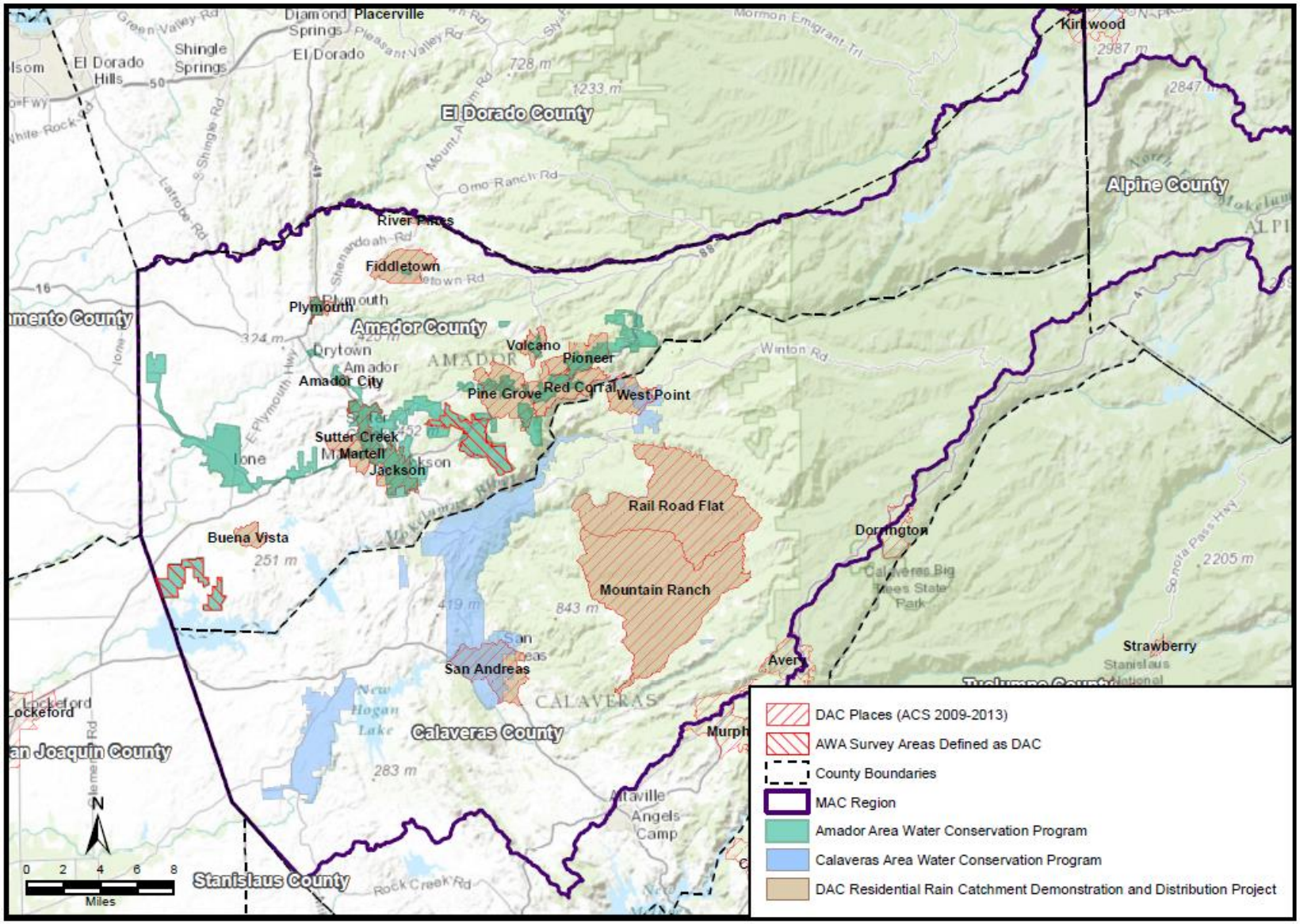
Amador Area DAC	MHI	Total DAC Area within AWA Service Area (acres)
Amador	$32,500	325
Fiddletown	$48,359	68
Jackson	$42,959	4,022
Martell	$13,814	1,027
Pine Grove	$44,148	1,306
Pioneer	$37,574	1,200
Plymouth	$45,000	716
Red Corral	$32,070	1,052
River Pines	$32,470	213
Sutter Creek	$45,919	1,044
Volcano	$0	255

Lake Camanche Village	$48,106	4,030
Raw Water Alignment	$34,554	5,369
TOTAL DAC AREA		20,627
TOTAL AREA	-	28,095
% DAC	-	73%

The Calaveras Area Water Conservation Program Implementation component (Task 12 of the Work Plan) will take place in the CCWD and CPUD service areas, as shown in Figure 7-3. The CCWD and CPUD service areas cover approximately 32,662 acres and contain approximately 7,893 acres of DAC designated census places as defined by the 2009-2013 ACS. These areas include West Point (MHI of $28,826) and San Andreas (MHI of $42,388). Per the 2015 Guidelines, a community must have an MHI less than or equal to $48,875 to be considered a DAC; therefore, these places are defined as DAC. Figure 7-3 provides a map showing this area, and illustrates that the Calaveras Area Water Conservation Program Implementation component boundaries and benefit area are comprised of approximately 24% DAC by area.

Calaveras Area DAC Community	MHI	Total DAC Area within CCWD Service Area (acres)
West Point	$28,826	1,481
San Andreas	$42,388	6,412
TOTAL DAC AREA	-	7,893
TOTAL AREA	-	32,662
% DAC	-	24%

Figure 7-3: MAC Region Water Conservation Program DAC Areas



The Home-Level Water Conservation for Severely Disadvantaged Communities component (Task 13 of the Work Plan), managed by the ATCAA, will focus on providing services to severely disadvantaged households within Amador and Calaveras Counties in the MAC Region. To determine eligibility for participation in its programs, ATCAA uses income guidelines provided by the California Department of Community Services and Development. These income guidelines are provided for the Low Income Home Energy Assistance Program and the Department of Energy Weatherization Program. These income guidelines, shown in Figure 7-4, are more restrictive than the DAC definition established in the 2015 Guidelines (for a household of four), which state that a community must have an MHI less than or equal to $48,875 to be considered a DAC. Therefore, this program component is expected to provide 100% of benefits to DACs.

Figure 7-4: ATCAA Income Guidelines

2015 Income Guidelines		
Persons in Household	Monthly Income	Annual Income
1	$1,996.89	$23,963.00
2	$2,611.31	$31,336.00
3	$3,225.74	$38,709.00
4	$3,840.17	$46,082.00
5	$4,454.59	$53,455.00
6	$5,069.02	$60,828.00
7	$5,184.23	$62,211.00
8	$5,299.43	$63,593.00
9	$5,414.64	$64,976.00
10	$5,529.84	$66,358.00

The DAC Residential Rain Catchment Demonstration and Distribution Project component (Task 14 of the Work Plan) will be implemented in DAC census places within the MAC Region, as shown in Figure 7-3. These areas include Sutter Creek (MHI of $45,919), Amador (MHI of $32,500), Jackson (MHI of $42,959), Plymouth (MHI of $45,000), Fiddletown (MHI of $48,359), Martell (MHI of $13,814), Pine Grove (MHI of $44,148), Pioneer (MHI of $37,574), Red Corral (MHI of $32,070), River Pines (MHI of $32,470), Volcano (MHI of $0), West Point (MHI of $28,826) San Andreas (MHI of $42,388), Rail Road Flat (MHI of $33,750), Mountain Ranch (MHI of $46,708) and Buena Vista (MHI of $48,594). Per the 2015 Guidelines, a community must have an MHI less than or equal to $48,875 to be considered a DAC; therefore, these places are defined as DAC. Figure 7-3 provides a map showing this area, and illustrates that the DAC Residential Rain Catchment Demonstration and Distribution Project component boundaries and benefit area will fully benefit DACs (100% of project area is within DAC designated census places).

Table 7-1 provides the costs of the tasks associated with the above described components, the estimated DAC area, and the cost-weighted DAC area. The costs for Tasks 1 through 10 are not used here as those efforts will not provide physical benefits, and will be allocated according to the costs of Tasks 11 through 14. In total, the MAC Region Water Conservation Program is estimated to be 77% DAC by project cost.

Table 7-1: MAC Region Water Conservation Program DAC Area Estimation

Task	Estimated DAC area percentage	Total Task Cost	Value of Benefit to DAC Areas
Task 11: Amador Area Water Conservation Program Implementation	73%	$198,020	$144,554,60
Task 12: Calaveras Area Water Conservation Program Implementation	24%	$73,393	$17,614.32
Task 13: Home-Level Water Conservation for Severely Disadvantaged Communities plus Contingency	100%	$240,492	$240,492.00
Task 14: DAC Residential Rain Catchment Demonstration and Distribution Project	100%	$62,472	$62,472.00
Total	**n/a**	**$574,377**	**$465,132.92**

The cost share requirement for this program, provided in Attachment 4, has been estimated based on the above described program components, which comprise Tasks 11 through 14 of the MAC Region Water Conservation Program. These tasks will provide the benefits described in Attachment 2 of this grant proposal. Table 7-2 provides a summary of these tasks, and the estimated cost match requirement included as part of Attachment 4.

Table 7-2: Cost Share Requirement Estimates for Tasks 11 through 13

Task	Estimated non-DAC area percentage	Total Task Cost	Value to Non-DAC areas	Estimated Cost Share Requirement[1]
Task 11: Amador Area Water Conservation Program Implementation	27%	$198,020	$53,465.40	$13,366
Task 12: Calaveras Area Water Conservation Program Implementation	76%	$73,393	$55,778.68	$13,945
Task 13: Home-Level Water Conservation for Severely Disadvantaged Communities	0%	$240,492	$0	$0
Task 14: DAC Residential Rain Catchment Demonstration and Distribution Project	0%	$62,472	$0	$0
Total	**-**	**$574,377**	**$109,244**	**$27,311**

1. Assumes 25% cost share applied to non-DAC portion of project cost.

Tasks 1, 3, 9 and 10 are required to provide administration and support for the overall program. It is assumed that the cost to implement Tasks 1, 3, 9, and 10 is roughly equivalent to the relative benefit of each program component. As such, costs for Tasks 1, 3, 9, and 10 have been divided according to the cost to implement each component. Table 7-3 summarizes how the remaining program costs are divided among each of the above described components, and provides the estimated cost share requirement based on DAC area and project cost.

Table 7-3: Cost Share Requirement Estimates for Tasks 1 through 10

Task[1]	Amador Area Water Conservation Program	Calaveras Area Water Conservation Program	Home-Level Water Conservation for Severely Disadvantaged Communities	DAC Residential Rain Catchment Demonstration and Distribution	Total
Cost allocation percentage (percent of total cost)[2]	34% ($198,020 of $574,377)	13% ($73,393 of $574,377)	42% ($240,429 of $574,377)	11% ($62,472 of $574,377)	100% ($574,377 of $574,377)
Task 1: Project Management	$12,592	$4,815	$15,555	$4,074	$37,036
Task 3: Reporting	$8,568	$3,276	$10,584	$2,772	$25,200
Task 9: Project Performance Monitoring Plan	$2,162	$827	$2,671	$700	$6,360
Task 10: MAC Region Conservation Program Coordinator	$145,323	$55,565	$179,516	$47,016	$427,420
Total Tasks 1, 3, 9, 10	$168,645	$64,483	$208,326	$54,562	$496,016
Non-DAC area	27%	76%	0%	0%	n/a
Cost Share (25% of cost for Non-DAC Area)[3]	**$11,384**	**$12,252**	**$0**	**$0**	**$23,636**
Value of Benefit to DAC Areas	**$123,111**	**$15,476**	**$208,326**	**$54,562**	**$401,475**

1. Tasks that are not allocated budget, as described in Attachment 4, are not included in this table.
2. Cost allocation percentage is calculated based on the cost to provide benefits from Tasks 11 through 14, which have a total budget of $574,017.
3. Cost share requirement calculated using the non-DAC area percentage and assumes a 25% cost share.

It total, the required cost match for the MAC Region Water Conservation Program is $50,947, and a partial DAC waiver will be sought for the $866,608 which will benefit DAC areas.

DAC Needs and Benefits

Given that water conservation has been identified as a need both within the region and statewide, the MAC Region Water Conservation Program will bring much-needed assistance to communities in the MAC Region to reduce water demand. Benefits to DACs are estimated to be equivalent to DAC areas estimated for Tasks 11 through 14, above. The primary benefit, water supply saved, is estimated as 275 AFY. If the 77% DAC area is applied to this benefit, the total water supply benefit to the DAC area is 212 AFY. The secondary benefit, water

quality improved through installation of rain catchment systems, is a part of Task 14, which is estimated to be 100% DAC. Therefore, DACs will realize the full water quality improvement of stormwater pollutant concentration reduction, including reduction in: total suspended solids (TSS) by 0.01 mg/L or 2 lb/yr, total kjeldahl nitrogen (TKN) by 0.0003 mg/L or 0.04 lb/yr and total phosphorus (TP) by 0.0001 mg/L or 0.01 lb/yr for the 0.1 AFY of stormwater to be captured through the DAC Residential Rain Catchment Demonstration and Distribution Project. All local communities, including DACs, have participated in the partnering agencies' ongoing water conservation programs. The MAC Region Water Conservation Program was developed to specifically target continuation of successful existing programs, as well as implementation of new, DAC-focused programs.

DAC Involvement and Engagement in Development of MAC Region Projects

The Projects identified for inclusion in this MAC Region funding application were developed as the result of discussions among the MAC Region Regional Participants' Committee (RPC), the primary stakeholder group governing MAC IRWM plan development and implementation. The MAC Region's RPC includes broad representation from water-related interests throughout the region. RPC members include:

- Cities and Special Districts: Amador Water Agency, Calaveras County Water District, Calaveras Public Utility District, East Bay Municipal Utility District, Jackson Valley Irrigation District, City of Ione
- Community/Environmental Organizations: Foothill Conservancy, Calaveras Planning Coalition, Upper Mokelumne River Watershed Council
- Disadvantaged Communities: City of Jackson, City of Plymouth, ATCAA
- Interested Residents: Retired Public Works Director
- Federal agencies U.S. Forest Service

Through their representation and engagement on the RPC, which identified and developed the projects to be included in this funding application, DACs were involved and engaged in development of each project identified for funding.